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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/806,458	03/23/2004	Se Kit Yuen	Q80268	1226
23373 7590 04/02/2007 SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			EXAMINER SNIDER, THERESA T	
			ART UNIT 1744	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE		MAIL DATE	DELIVERY MODE	
3 MONTHS		04/02/2007	PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/806,458	YUEN, SE KIT.	
	Examiner	Art Unit	
	Theresa T. Snider	1744	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply, and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 2-4 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 and 5-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Election/Restrictions

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1 and 5-13, drawn to a dust collecting machine, classified in class 15, subclass 339.
 - II. Claims 2-4, drawn to an electronic circuit system, classified in class 250.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions I and II are related as combination and subcombination. Inventions in this relationship are distinct if it can be shown that (1) the combination as claimed does not require the particulars of the subcombination as claimed for patentability, and (2) that the subcombination has utility by itself or in other combinations (MPEP § 806.05(c)). In the instant case, the combination as claimed does not require the particulars of the subcombination as claimed because it does not require a circuit for a wavelength of 253.7 nanometer. The subcombination has separate utility such as powering of a ray tube in a water sterilizer.

The examiner has required restriction between combination and subcombination inventions. Where applicant elects a subcombination, and claims thereto are subsequently found allowable, any claim(s) depending from or otherwise requiring all the limitations of the allowable subcombination will be examined for patentability in accordance with 37 CFR 1.104. See MPEP § 821.04(a). Applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

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3. Because these inventions are independent or distinct for the reasons given above and there would be a serious burden on the examiner if restriction is not required because the inventions have acquired a separate status in the art in view of their different classification, restriction for examination purposes as indicated is proper.

4. During a telephone conversation with Alan Kasper on 3/22/2007 a provisional election was made without traverse to prosecute the invention of Group I, claims 1 and 5-13. Affirmation of this election must be made by applicant in replying to this Office action. Claims 2-5 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Priority

5. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

6. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 17(figure 9), 41,42,44(figures 9 and 11). Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each

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drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

7. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 49(page 5).

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

8. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because:

reference character "49" has been used to designate both movable vacuum cleaner(page 5, 2nd paragraph, page 6, line 7) and movable cleaning head(page 5, 2nd paragraph, page 6, line 7);

reference character "30" has been used to designate both round contacting sockets(page 5, line 3) and contacting needles(page 5, 2nd paragraph);

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

9. The drawings are objected to because figure 7 shows '15' on the same side of the body as 19 however in figure 2 they are shown on opposite sides. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and

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informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

10. The disclosure is objected to because of the following informalities:

Exemplary of such:

The appropriate headings(Summary of the Invention, Brief Description of the Drawings, etc.) should be inserted in the specification.

Page 2, line 4, 'ray' should be replaced with 'rays';

Line 4, 'a' should be inserted after 'on' and 'in';

Line 8, 'a' should be inserted after 'for'.

Page 2, 4th paragraph, 'tubes' should be replaced with 'tube';

'ray so' should be replaced with 'rays so'.

Page 4, line 1, ';' should be replaced with '.';

1st paragraph, 'at upper portion' should be replaced with 'at an upper portion';

'an exhaust outlets' should be replaced with 'exhaust outlets';

it is unclear as to what is meant by 'slingshot' in the given context;

it is unclear as to what is meant by a 'hand' handle;

it is unclear as to what is meant by 'horses' in the given context.

2nd paragraph, 'said function' should be replaced with 'function';

3rd paragraph, 'connecting power' should be replaced with 'connecting a'.

Page 5, line 5, it is unclear as to what is meant by a 'unit' inner chamber;

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1st paragraph, it is unclear as to what is meant by a 'transmitting mirror made of transparent material'; a mirror is typically known to be reflective, not transparent;

'the dirty' should be replaced with 'the dirt'.

2nd paragraph, it is unclear as to what is meant by 'faucet' in the given context;

it is unclear as to whether the 'Another air inlet' is in addition to that set forth early or one in the same;

it is unclear as to what is meant by 'can movably connected'.

Page 6, line 5, it is unclear as to what is meant by 'to outside and inside';

2nd paragraph, 'an then via' should be replaced with 'via';

'exhausting outlet' should be replaced with 'exhaust outlets' to correspond with page 4;

'will be forcedly disinfect' should be replaced with 'will be forcedly disinfected'.

Appropriate correction is required.

11. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: it is unclear as to where in the specification is disclosed that the cleaning head is freely adjusted to any angle(claim 6).

Claim Rejections - 35 USC § 112

12. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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13. Claims 1 and 5-13 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential structural cooperative relationships of elements, such omission amounting to a gap between the necessary structural connections. See MPEP § 2172.01. The omitted structural cooperative relationships are: claim 1 recites a list of structural elements however fail to provide any structural connection between them.

14. Claims 1 and 3-13 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Exemplary of such:

Claim 1, lines 1-2, 'with a streamlined structural body' should be moved from the preamble to the body of the claim;

Line 4, it is unclear as to what is meant by a 'hand' handle;

Line 4, it is unclear as to what constitutes 'long'.

Claim 5, line 1, it is unclear as to which handle is being referred; the hand or the moveable handle?

Line 2, the 'machine' body lacks proper antecedent basis.

Claim 6, line 1, the 'machine' body lacks proper antecedent basis;

Line 4, 'the floor surface' should be replaced with 'a floor surface'.

Claim 7, line 1, the 'machine' body lacks proper antecedent basis;

Line 2, 'the movable cleaning head' lacks proper antecedent basis;

Lines 2-3, it is unclear as to whether the 'ultraviolet ray transmitting tube' is in addition to that of claim 1 or one in the same.

Claim 8, line 3, it is unclear as to whether the transmitting mirror is in addition to that of claim 1 or one in the same;

Line 3, it is unclear as to what is meant by the mirror 'radiating extreme ultraviolet ray'.

Claim 10, line 2, it is unclear as to whether the 'a chargeable battery' is in addition to that of claim 1 or one in the same.

Claim 11, line 2, the 'machine' body lacks proper antecedent basis.

Claim 12, line 3, the 'machine' body lacks proper antecedent basis;

Line 3, 'the power supply' lacks proper antecedent basis.

Claim 13, the 'built-in' tubes within the box body and cleaner lack proper antecedent basis; claim 1 fails to set forth where a tube is located.

Claim Rejections - 35 USC § 103

15. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

16. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.

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3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

17. Claims 1, 5-6, 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al.(6,108,864) in view of Hung(5,233,723).

Thomas et al. discloses a similar dust collecting machine however fails to disclose an extreme ultraviolet ray transmitting tube.

Thomas et al. discloses a body (fig. 1, #12).

Thomas et al. discloses a draft fan and motor (fig. 3, #52).

Thomas et al. discloses a circuit board and circuit element (col. 2, line 67).

Thomas et al. discloses a switching push button (col. 3, lines 63-64).

It would have been obvious to one of ordinary skill in the art to provide an indicating light in Thomas et al. to alert an operator to the operating conditions of the machine.

Thomas et al. discloses a hand handle (fig. 3, #102).

Thomas et al. discloses an externally mounted long moveable handle (fig. 1, #20).

With respect to claims 1 and 8, Hung discloses a dust collecting machine having an ultraviolet ray transmitting tube and a transparent transmitting mirror (fig. 3, #4,31). It would have been obvious to one of ordinary skill in the art to provide the tube and mirror of Hung in Thomas et al. to allow for disinfection of the suctioned air.

Thomas et al. discloses a filter screen (fig. 3, #80).

Thomas et al. discloses a chargeable battery (fig. 3, #104).

Thomas et al. discloses a garbage box body (fig. 3, #70,73).

Thomas et al. discloses a power input line (col. 3, lines 64-65).

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Thomas et al. discloses an externally mounted movable vacuum cleaner (fig. 1, #18).

With respect to claim 5, Thomas et al. discloses the handle attached to the upper part of the body and the long handle attached to a trailing end of the body (fig. 1, #12,20, unnumbered 102).

With respect to claim 6, Thomas et al. discloses the body can be used with or without the long handle and the head is freely adjusted to any angle (col. 1, lines 61-65).

With respect to claim 9, Thomas et al. discloses the filter screen can be cleaned and replaced (col. 1, lines 37-39).

With respect to claim 10, Thomas et al. discloses the machine can be powered by a battery or power supply line (col. 3, lines 62-65).

18. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al.(6,108,864) in view of Hung(5,233,723) as applied to claim 1 above, and further in view of McDowell(4,766,638).

Thomas et al. in view of Hung discloses a similar dust collecting machine however fails to disclose charging from an external power source.

McDowell discloses a dust collecting machine with a chargeable battery that can be charged from an external power supply (col. 4, lines 67-68). It would have been obvious to one of ordinary skill in the art to provide the external charging of McDowell in Thomas et al. in view of Hung to allow for recharging of the battery for continued use in the machine.

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19. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al.(6,108,864) in view of Hung(5,233,723) as applied to claim 1 above, and further in view of Oh et al.(6,968,595).

Thomas et al. in view of Hung discloses a similar dust collecting machine however fails to disclose an ultraviolet ray transmitting tube in the body.

Hung discloses an ultraviolet ray transmitting tube in a cleaning head (fig. 1, #4). Oh et al. discloses a dust collecting machine with an ultraviolet ray transmitting tube in the body (fig. 5, #500). It would have been obvious to one of ordinary skill in the art to provide an ultraviolet ray transmitting tube in the body of Thomas et al. in view of Hung, as disclosed in Oh et al., to allow for disinfection of the air when the cleaning head is not connected to the body.

20. Claims 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thomas et al.(6,108,864) in view of Hung(5,233,723), as applied to claim 1 above, and further in view of Oh et al.(6,968,595) and Cuddeback(2,632,912).

Thomas et al in view of Hung discloses a similar dust collecting machine however fails to disclose a transmitting tube in a garbage box body and the connections therefore.

Oh et al. discloses a dust collecting machine with an ultraviolet ray transmitting tube in a garbage box body (fig. 5, #500). It would have been obvious to one of ordinary skill in the art to provide an ultraviolet ray transmitting tube in the garbage box body of Thomas et al. in view of Hung, as disclosed in Oh et al., to allow for disinfection of the air when the cleaning head is not connected to the body.

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Cuddeback discloses a dust collecting machine with an ultraviolet ray transmitting tube having a power contacting part (fig. 1, #47, col. 4, lines 9-15). It would have been obvious to one of ordinary skill in the art that the tubes of Thomas et al. in view of Hung and Oh et al. would require power contacting parts, as disclosed in Cuddeback, to allow for powering of the tube and replacement thereof.

Conclusion

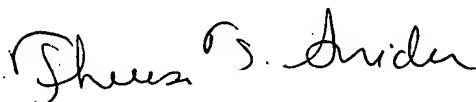
21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Buckey, Yonkers, Jr., Guyer, Kurz and Wen disclose a dust collecting machine with an ultraviolet ray transmitting tube. Hult et al. discloses a dust collecting machine with a chargeable battery.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Theresa T. Snider whose telephone number is (571) 272-1277. The examiner can normally be reached on Monday-Friday (5:30am-2:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gladys Corcoran can be reached on (571) 272-1214. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

A handwritten signature in cursive script, appearing to read "Theresa T. Snider".

Theresa T. Snider
Primary Examiner
Art Unit 1744

3/26/07